

Irrigation Canals in the Uinta Basin,  
Knight Ditch  
Duchesne Vicinity  
Duchesne County  
Utah

HAER No. UT-30-I

HAER  
UTAH  
7-DUCH.V,  
1 I-

**PHOTOGRAPHS**

**WRITTEN HISTORICAL AND DESCRIPTIVE DATA**

Historic American Engineering Record  
Rocky Mountain Regional Office  
National Park Service  
U.S. Department of the Interior  
P.O. Box 25287  
Denver, Colorado 80225

HISTORIC AMERICAN ENGINEERING RECORD

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**Location:** Sections 19, 20, 21, 28, 27, 26, 35, 36, T2S, R5W; Sections 1, 12, T3S, R5W  
Utahn, Duchesne County, Utah

**Quad:** Talmage and Duchesne

**Date of Construction:** 1913-1914

**Original Use:** Irrigation Canal

**Present Use:** Abandoned

**Significance:** The Knight Ditch is significant in Uinta Basin irrigation history for several reasons. The remaining flumes are excellent examples of canal building technology in the early 20th century. Vandalism and natural forces have destroyed many sections of the flume, leaving behind only traces of its existence. But, in other places, the flumes are still in reasonable conditions. Social and cultural significance is illustrated through these remains by depicting the almost insurmountable obstacles homesteaders tried to overcome to bring water to their dry lands. Finally, the role of Utah entrepreneur and financier Jesse Knight in the development and failure of the Blue Bench Irrigation District, is significance in the history of private investment and its impact on irrigation.

**Inventoried by:** James Jurale, David Stalheim, Craig Fuller  
National Park Service  
July 1983

### DESCRIPTION AND BACKGROUND HISTORY

Blue Bench Irrigation District #1 was officially organized on July 15, 1909. The district estimated the cost of developing the water, including two miles of canal, at \$125,000, which they immediately bonded the district for. In March 1910, the district hired Albert Halen to survey the canal, including estimates of construction costs. Halen reported in September that the cost of constructing the canal, under his specifications, would be \$89,000. It was not until 1913, however, that any bids were submitted for the construction of the canal.

Jesse Knight and W. O. Creer of Provo, Utah, proposed to construct the canal for \$123,076.88. The proposal was accepted and an agreement was signed on March 22, 1913. On May 19th, the construction contract was amended, reflecting additional costs incurred when the canal's plans and specifications were changed.

The principal physical remains of the Knight Ditch are approximately five miles of fluming material. In order to meet the objective of irrigating as much land as possible on the Blue Bench, the canal, after diverting its water from Rock Creek through an old Indian canal, had to traverse several miles of cliffs and hollows near the townsite of Utahn to make it onto the Blue Bench at the highest possible elevation. The cliffs and spacious hollows were a formidable obstacle to the construction of the canal. Along the cliffs, side hill flumes with the following dimensions were constructed:

Mud Sills	2" x 12"
Stringers	6" x 8"
Flume Sills	4" x 6"
Standards	2" x 6"
Top Braces	2" x 4"
Box	2" material
Battons	1/2" x 4" or 1" x 4"

The flumes were all made out of native timber.

In order to cross the numerous hollows, either a high trestle flume or a syphon were constructed. It was first proposed to construct the high trestly flume over most of the hollows. The amendment to the construction contract on May 19, 1913, changed most of these flumes to syphons. The syphons were made out of Oregon fir (Douglas fir), 1-5/8 inches thick with 5/8-inch steel bands spaced from 4 to 10 inches apart. The size of the syphon was between 42 and 50 inches. Almost all evidence of these syphons, except for some of the boxes that channeled the water into the syphons, have been removed from their sites.

After the channel crossed Benson Hollow, the topography became less severe and an earthen canal was constructed up to Blue Bench. There are a few spots where you can still see the old canal bed.

By May 1914, nearly all of the construction work on the canal was completed. Troubles with the wooden flumes began to appear almost immediately. By August, the company was already repairing some of the side hill flumes. Problems with the canal continued to arise, making it difficult for the Blue Bench Irrigation District #1 to prove up on their water filings of 130 second-feet. A resolution was passed in 1916 asking for an extension of time to prove beneficial use. In 1918, farmers of the irrigation district were complaining about a lack of water in the canal and the poor construction of Jesse Knight and W. O. Creer. By this time, however, the Knight Investment Company had control of the irrigation district. The bonds for the construction of the canal were purchased by the Knight Investment Company. Apparently, between 1920 and 1949, the Knight

Investment Company operated some large agricultural projects on the Blue Bench. Owing largely to the failure of the flumes to carry a sufficient quantity of water, agriculture on the Blue Bench failed. The water rights were sold to Duchesne County in 1949 for \$621.30.

**REFERENCES**

Knight Investment Company Papers, "Record of Minutes of the Blue Bench Irrigation District #1," MSS 278, Brigham Young University.

"Contract for Construction of Irrigation System," Duchesne County Recorder, Miscellaneous Book 2.